



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,483	02/05/2004	Robert S. Cooper	114.0006	4979
27997 7590 04/28/2009 PRIEST & GOLDSTEIN PLLC 5015 SOUTHPARK DRIVE SUITE 230 DURHAM, NC 27713-7736				
EXAMINER				
KOVACEK, DAVID M				
ART UNIT		PAPER NUMBER		
2626				
MAIL DATE		DELIVERY MODE		
04/28/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/772,483

Applicant(s)

COOPER ET AL.

Examiner

David Kovacek

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This Office Action is response to applicant's Amendment, filed 11/03/1008, in which the applicant amends **claims 1-2, 10, and 12**, adds new **claims 17-18**, and argues for patentability of the claims over the previously cited prior art.

Response to Amendment

2. The applicant's amendments to the **claim 12** have been considered and are accepted. It is noted by the examiner that the current amendments substantially change the scope of the limitations of the claims as previously presented. It is noted by the examiner that formal acceptance of the conditions of the claims is not an indication of allowability of the claims over the prior art. Appropriate rejections are included in this Office Action in the relevant sections below.

3. The applicant's amendments to the claims with respect to the addition of new **claims 17-18** have been considered and are accepted. It is noted by the examiner that formal acceptance of the conditions of the claims is not an indication of allowability of the claims over the prior art. Appropriate rejections are included in this Office Action in the relevant sections below.

Response to Arguments

4. Applicant's arguments with respect to **claims 1** and **10** have been considered but are moot in view of the new ground(s) of rejection.

Certain arguments remain relevant in view of the current rejection, and are thus addressed below.

Firstly, the applicant argues that the teachings of Surace (US Patent 6,334,103; cited previously) are insufficient to disclose the new limitation of **claim 1** comprising a plurality of modules having multiple functions. The examiner respectfully disagrees, citing the disclosures of Surace directed to a Voice Interface with Personality 103 (Fig. 9; Col. 13, lines 03-09) and a Voice Application 902 (Col. 16, lines 07-09), each of which are implemented using various sub-modules providing different functionality of interest. In fact, the disclosure of Surace specifically includes the teaching that "...application 902 provides various functionality including an email service, a stock quote service, a news content service, and a voice mail service (Col. 16, lines 07-09)." The applicant makes no specific arguments against these teachings of Surace, nor provides any further evidence, reasoning, or support for the initial argument.

The applicant further argues that "different prompts for the different functions may be advantageous (Remarks of 11/03/2008: Page 8, paragraph 01)." It is believed by the

examiner that his argument is meant to imply that the teachings of Surace in combination with Ehlen (US PGPUB 2004/0006480; cited previously) are insufficient to disclose this feature of the invention. It is first noted by the examiner that this particular feature of the invention is not present within the limitations of **claim 1** explicitly. It is next noted that the applicant seems to indicate that Surace does in fact teach that "this approach may be related to making the responses selected more life like, for example, by not repeating the same prompt too frequently rather than adapting the prompt to the user's expertise with the function (Remarks of 11/03/2008: Page 8, paragraph 03)," with respect to the disclosure of Surace at Col. 20, lines 09-51. While it is noted by the examiner that the reasons for addressing different prompts to the user may not be exactly the same as those of the applicant in the teachings of Surace, the examiner maintains that the teachings of the combined disclosures of Surace in view of Ehlen are in fact relevant to the limitations of the claims and that this seems to be contradictorily indicated by the applicant with these particular arguments.

Lastly, the applicant argues that "Surace...implies, but does not explicitly disclose reciting a consecutive error counter (Remarks of 11/03/2008: Page 9, paragraph 01)." The applicant then notes that the previous Office Action directs attention to paragraphs [0032-0034] of Ehlen, and seems to agree that these teachings are related to the limitation in question, but "there is no teaching that these 'three utterances' related to the same function or even use of the same module (Remarks of 11/03/2008: Page 9, paragraph 03)." It is noted by the examiner that this particular limitation is not required by the language

of **claim 1** as indicated by the applicant when given the broadest reasonable interpretation of one of ordinary skill in the art. Additionally, the examiner argues that given the context of the teachings of Ehlen that this particular feature is strongly implied given the disclosure of Ehlen directed to repetition of the input resulting in similar errors, such as the system tracking the number of times the user requests directions (Ehlen: Page 3, paragraph 0032).

The examiner further contends that the assertions of the applicant are additionally non-persuasive because the previous rejection relied upon a standard of obviousness, rather the explicit rejection and there is no evidence, reasoning, or further support by the applicant to show that the teachings of Surace in combination of Ehlen do not in combination render obvious the limitation in question, are incompatible references, or somehow teach away from the limitation in question.

For at least the above reasons, the above arguments are found to be non-persuasive by the examiner.

Claim Objections

5. **Claim 1** is objected because the newly added amendment of a plurality of modules having multiple functions is found to be ambiguous. In particular, the examiner notes that the specification supports what is believed to be the intended limitation of "a plurality of modules, *each respectively* having multiple functions" (i.e., a plurality of said modules each have a plurality of functions). However, the examiner also contends that a second valid interpretation of "a plurality of modules having multiple *distinct* functions" (i.e., the plurality of modules are capable of performing a plurality of functions, each function may be performed by only one module) is also a valid interpretation.

It is noted by the examiner while the latter of these interpretations is addressed by the previously cited prior art as noted in the previous Office Action, the examiner contends that the former of these interpretations is also adequately addressed by the previously addressed prior art as applied above.

6. **Claims 17-18** are objected to because of the following informalities:

- **Claim 17** claims dependency upon the method of claim 1, when in fact, the limitations of **claim 1** are directed to a system and not a method. This interpretation has additionally been considered for the purposes of examination.

- **Claim 18** should instead read, "...revising the user experience level upon detection of a predetermined number [[umber]] of consecutive errors.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
8. **Claims 1-17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Surace in view of Ehlen in further view of Cohen (US Patent 6,560,576; cited previously).

Regarding **claim 1**, Surace discloses a voice recognition system comprising:

- a plurality of modules having multiple functions [Voice interface with personalities; voice application] for receiving voice inputs from a user and performing services in response to the voice inputs at least one of the plurality of modules providing a user prompt and receiving an input [phrase delimiter, recognizer, recognition manager, recognition grammar;

voice activated services] (Fig. 9, elements 103, 902; Col. 12, lines 52-56; Col. 13, lines 03-09; Col. 16, lines 07-09), and

- passing information identifying the module and information identifying a function being performed when the unrecognized input was detected (Col. 10, lines 22-35); and

It is noted by the examiner that though identification of the module and function is not explicitly disclosed by Surace, this is inherently required of any help determination system that is tailored to address problems with particular functions, such as that disclosed by Surace.

- a user information database storing user proficiency information [expert/novice rules; recognition history; prompt history] (Fig. 9, elements 916, 928; Col. 9, lines 13-23; Col. 13, lines 52-57; Col. 14, lines 46-62);
- the help application selecting a help prompt for presentation to the user subsequent to receipt of the unrecognized input [politeness rules determine appropriate prompt] (Fig. 7, element 702; Col. 10, lines 30-35, 41-50),
- the help application selecting the help prompt based upon the user's proficiency [expert/novice rules] and the information identifying the module and the function

[determination of repeated help prompts] (Col. 9, lines 17-24; Col. 10, lines 30-35, 41-50).

Surace further implies, but does not explicitly disclose if the input is not recognized, resetting a consecutive error counter invoking a help application (Col. 10, lines 25-29) in disclosing a system that keeps a record of repeated usage of help prompts.

Surace does not explicitly disclose, but Ehlen discloses:

- if the input is not recognized, resetting a consecutive error counter invoking a help application [failure of recognition on more than three utterances in a row] (Page 3, paragraphs 0032-0034);
- resetting a consecutive error counter invoking a help application [number of problematic inputs received] (Page 3, paragraphs 0031-0033); and
- passing information identifying the module and information identifying a function being performed when the unrecognized input was detected [help tailored to the particular context required] (Page 2, paragraph 0027).

Neither Surace nor Ehlen discloses, but Cohen discloses limitations directed to indicating user experience with each function of each module [usage history maintained, including user-specific variables; browser maintains and applies various sets of conditions, corresponding to a different

help prompt; novice and expert help prompts] (Col. 1, line 66 – Col. 2, line 07; Col. 3, lines 35-41, lines 57-60; Col. 5, lines 48-54) and tailoring the system's performance to the user,utilizing the information identifying the module and the function when the unrecognized input was detected [browser maintains usage history of each user, which tracks dialog states of the user and other user-specific variables] (Col. 1, line 66 – Col. 2, line 07; Col. 8, lines 11-51).

The references are combinable because each is directed to a voice dialogue system that is operable to provide the user with helpful prompts in order to progress operation. Ehlen provides motivation to combine the references in disclosing the utility of context-dependent help prompts in order to assist the user easily integrate information provided by the system (Page 2, paragraph 0027). Cohen further provides motivation in disclosing the utility of tailoring help prompts to an individual user and task at hand in order to improve the efficiency of said user in acquiring help with the system (Col. 1, lines 47-64; Col. 3, lines 26-35).

Therefore, the examiner contends that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Surace using the teachings of Ehlen in order to implement a voice dialogue system that is operable to provide the user with helpful prompts in order to progress operation, is further directed to utilizing context-dependent help prompts in order to assist the user in easily integrating information provided by the system, and is further still operable to

utilize tailored help prompts to the individual user and task at hand in order to improve the efficiency of said user in acquiring help with the system.

Regarding **claim 2**, Surace in view of Ehlen and in further view of Cohen discloses all limitations of **claim 1** as applied above, and Ehlen further discloses that the consecutive error counter is incremented each time a subsequent unrecognized input is received [tracking user requests and help requests] and a more elaborate help prompt [problematic situation help dialog] is selected upon detection of repeated errors [three of more input utterance errors in a row], said detection based on an increasing consecutive error counter count [initiating a help move based on parameters related to problematic inputs] (Page 3, paragraphs 0032-0034).

This limitation is directly related to the limitations of **claim 1** disclosed by Ehlen as applied above, and therefore the motivation to combine the references is the same for **claim 2** as applied above to **claim 1**.

Regarding **claim 3**, Surace in view of Ehlen and in further view of Cohen discloses all limitations of **claim 2** as applied above, and Surace further discloses that the user information includes information indicating the user's proficiency in using the system [expert/novice rules, Recognition history] (Fig. 9, element 916; Col. 9, lines 13-23; Col. 13, lines 52-57).

Regarding **claim 4**, Surace in view of Ehlen and in further view of Cohen discloses all limitations of **claim 3** as applied above, and Surace further discloses that the information indicating the user's proficiency includes information indicating the user's proficiency with each function available to the user [documents subscriber's experience with a particular prompt suite] (Fig. 9, element 930; Col. 14, lines 57-65).

Regarding **claim 5**, Surace in view of Ehlen and in further view of Cohen discloses all limitations of **claim 4** as applied above, and Surace further discloses that the information indicating a user's proficiency with each function includes a function usage tally for each function, the function usage tally for a function indicating a number of times the user has successfully employed the function [selection of prompts based upon both prompt history and recognition history] (Fig. 9, elements 916, 930; Col. 14, lines 57-65; Col. 15, lines 20-28).

Regarding **claim 6**, Surace in view of Ehlen and in further view of Cohen discloses all limitations of **claim 5** as applied above, and Surace further discloses that the help application employs the function usage tally for the function being used when the unrecognized input was detected, in order to determine a user experience category for the user with respect to the function (Col. 9, lines 13-23; Col. 10, lines 25-29, 41-57).

Regarding **claim 7**, Surace in view of Ehlen and in further view of Cohen discloses all limitations of **claim 6** as applied above, and Surace further inherently discloses that the help application determines the user experience category by selecting an experience category associated with a range of function usage tally values within which the user's function usage tally for the function falls in disclosing that the system bases prompt selection upon a combination of expert/novice rules and their application to the user's expertise as determined by data regarding the user's current session and experience across session (Col. 9, lines 13-23).

Regarding **claim 8**, Surace in view Ehlen and in further view of Cohen discloses all limitations of **claim 7** as applied above, and Surace further discloses that the help application tracks consecutive errors [requirement of negative comment] and recognition failures [failure] and selects appropriate help prompts [statement of problem or blame a third party] in the case of consecutive errors and recognition failures (Col. 9, lines 39-57).

It is additionally noted by the examiner that Ehlen also discloses a similar limitation [triggering of help move based on a plurality of user utterances]] (Page 3, paragraph 0032).

Regarding **claim 9**, Surace in view of Ehlen and in further view of Cohen disclose all limitations of **claim 8** as applied above, and Surace further discloses that the user's function usage tally [recognition history; prompt history] for a function is updated upon each successful use of that function [recognition history is maintained; prompt history documents subscriber's experience with a particular prompt suite] (Fig. 9, elements 916, 930; Col. 13, lines 52-56; Col. 14, lines 57-62; Col. 15, lines 20-28).

Regarding **claim 10**, this claim only contains limitations which are very similar to limitations previously addressed as presented in **claim 1**, and therefore this claim is rejected for the same reasons as applied above to **claim 1**.

Claim 1 corresponds to **claim 10** since they are related as the apparatus and method of using the apparatus respectively, and hence are rejected for the same reasons as given above.

Regarding **claims 11-13**, each of these claims only contain limitations which are very similar to limitations previously addressed as presented in **claim 7**, and therefore each of these claims is rejected for the same reasons as applied above to **claim 7**.

It is noted by the examiner that **claim 7** is directed to an apparatus and **claims 11-13** are directed to a method of using various aspects of the apparatus of **claim 7** respectively, and hence **claims 11-13** are rejected for the same reasons as given above.

It is further noted by the examiner with respect to **claim 12**, that the limitations directed to during utilization of the function is implied by Ehlen (Page 3, paragraphs 0032-0034) for the reasons given in the Response to Arguments above.

Regarding **claim 14**, this claim is very similar to **claim 8** and is therefore rejected for the same reasons as applied above to **claim 8**.

It is noted by the examiner that **claim 8** is directed to an apparatus and **claim 14** is directed to a method of using various aspects of the apparatus of **claim 8** respectively, and hence **claim 14** is rejected for the same reasons as given above.

Regarding **claim 15**, Surace in view of Ehlen and in further view of Cohen discloses all limitations of **claim 14** as applied above, and Surace further implies that the selection of a prompt is more dependent on the number of errors or recognition failures detected as the number of consecutive errors or recognition failures increases in disclosing a dictation of prompt length selection based upon user experience [expert/novice rules] (Col. 9, lines 17-23) and also taking appropriate context-sensitive actions in response to a user requiring repeated help in the same session (Col. 10, lines 25-29, 41-57).

Regarding **claim 16**, Surace in view of Ehlen and in further view of Cohen discloses all limitations of **claim 15** as applied above, and Surace further discloses updating the user's function usage tally for a function upon

each successful use of that function [maintaining recognition history; documenting the subscriber's experience with a particular prompt suite] (Fig. 9, elements 916, 930; Col. 13, lines 5'-56; Col. 14, lines 57-62; Col. 15, lines 20-28).

Regarding **claim 17**, Surace in view of Ehlen and in further view of Cohen discloses all limitations of **claim 1** as applied above, and Surace further discloses a directory module [access to an address book and phone book; add, find, and call contacts in an address book] (Fig. 4, element 410; Col. 8, lines 56-59), a voice dial module [voice interface operable for telephony applications; operate functions via telephone including call a contact] (Col. 1, lines 55-60), and a voicemail access module [access to voice mail; collect messages and access multiple voice mail systems] (Fig. 4, element 410; Fig. 15; Col. 8, lines 56-59; Col. 20, lines 09-29; Table B). Additional disclosure by Surace with respect to each of these limitations is found with respect to Figure 9, element 900 at Col. 16, lines 15-35.

9. **Claim 18** is rejected under 35 U.S.C. 103(a) as being unpatentable over Surace in view of Ehlen, in further view of Cohen, and in further view of US PG PUB 2002/0135618, hereinafter referred to as Maes.

Regarding **claim 18**, Surace in view of Ehlen and in further view of Cohen discloses all limitations of **claim 12** as applied above.

The combination of Surace, Ehlen and Cohen as applied above does not disclose, but Maes implies revising the user experience level upon a detection of a predetermined number of consecutive errors [if a user commits many errors, a more complex explanation may be required] (Page 16, paragraph 0175; Page 121, paragraph 0203).

The references are combinable because each is directed to a voice dialogue system that is operable to provide the user with helpful prompts in order to progress operation. Ehlen provides motivation to combine the references in disclosing the utility of context-dependent help prompts in order to assist the user easily integrate information provided by the system (Page 2, paragraph 0027). Cohen further provides motivation in disclosing the utility of tailoring help prompts to an individual user and task at hand in order to improve the efficiency of said user in acquiring help with the system (Col. 1, lines 47-64; Col. 3, lines 26-35). Maes further provides motivation to combine in disclosing the utility of adjusting help prompts in response to a determined focus and mood of the user in order to provide a more effective conversational computing environment for said user (Page 1, paragraphs 0009-0010).

Therefore, the examiner contends that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Surace using the teachings of Ehlen in order to implement a voice dialogue system that is operable to provide the user with helpful prompts in order to progress operation, is further directed to utilizing context-dependent help prompts in order to assist the user in easily integrating information provided by the system, and is further still operable to

utilize tailored help prompts to the individual user and task at hand in order to improve the efficiency of said user in acquiring help with the system, and is further operable still to adjust help prompts in response to a determined focus and mood of the user in order to provide a more effective conversational computing environment for said user.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Abella (US Patent 6,044,347) teaches a method and apparatus for object-oriented rule-based dialogue management.
- Chapados (US Patent 6,356,869) teaches a method and apparatus for discourse management.
- Takemoto (US patent 6,718,490) teaches a method and apparatus for controlling warning-information.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Kovacek whose telephone number is (571)270-3135. The examiner can normally be reached on M-F 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R Hudspeth/
Supervisory Patent Examiner, Art Unit 2626